

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Inquiry Concerning the Deployment of Advanced
Telecommunications Capability to All Americans
In a Reasonable and Timely Fashion, and Possible
Steps to Accelerate Such Deployment Pursuant to
Section 706 of the Telecommunications Act of
1996, as Amended by the Broadband Data
Improvement Act

GN Docket No. 12-228

FCC 12-91

**REPLY COMMENTS OF
THE MASSACHUSETTS DEPARTMENT OF
TELECOMMUNICATIONS AND CABLE**

Commonwealth of Massachusetts
Department of Telecommunications and Cable

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The Massachusetts Department of Telecommunications and Cable (MDTC)¹ hereby files reply comments in response to the Ninth Broadband Deployment Notice of Inquiry (NOI) released by the Federal Communications Commission (FCC) on August 21, 2012, in the above-captioned proceeding.² The FCC initiated the Ninth NOI to solicit data and information to assist it in its annual task, as required by Section 706 of the Telecommunications Act of 1996, as

¹ The MDTC is the exclusive state regulator of telecommunications and cable services within the Commonwealth of Massachusetts. G. L. c. 25C, § 1.

² *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 12-228, Ninth Broadband Deployment Notice of Inquiry, FCC 12-91 (rel. Aug. 21, 2012) (Ninth NOI).

amended (Act),³ of determining whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.⁴ Despite the efforts of the private sector and others to bring broadband to all Americans, the FCC has found in its last three broadband progress reports that advanced telecommunications capability has not been deployed in a timely fashion.⁵ In this NOI, the FCC seeks input on a broad range of issues pertaining to the progress made toward full deployment of broadband and the measurement of affordable broadband availability.⁶

The MDTC, in these reply comments, highlights three provisions that will advance the FCC's evaluation of progress toward universal, affordable broadband deployment: affordability, quality of service metrics, and inclusion of community anchor institutions (CAIs). The MDTC renews its call to the FCC to consider affordability as a key factor when evaluating the availability of advanced telecommunications capability.⁷ Furthermore, the FCC should include quality of service and pricing measurements in an expanded definition of broadband availability, allowing the FCC to effectively evaluate the progress of technology-neutral affordable broadband deployment. Finally, the FCC should expand its assessment of broadband availability to include all CAIs because of the vital nature of these institutions in local communities.⁸

³ Telecommunications Act of 1996, Pub. L. No. 104-104, § 706(b), 110 Stat. 56, 153 (codified at 47 U.S.C. §1302(b)) (as amended in relevant part by the Broadband Data Improvement Act, Pub. L. No. 110-385, 122 Stat. 4096 (2008)) (Act).

⁴ Ninth NOI, ¶ 1.

⁵ *Id.* at ¶ 3.

⁶ *Id.* at ¶ 2.

⁷ Seventh Broadband Deployment NOI, MDTC Reply Comments, GN Docket No. 10-159 (filed Oct. 5, 2010), p. 2; Eighth Broadband Deployment Notice of Inquiry (Eighth NOI), MDTC Comments, GN Docket No. 11-121 (filed Sept. 6, 2011), p. 4.

⁸ Eighth NOI, MDTC Comments, GN Docket No. 11-121 (filed Sept. 6, 2011), pp. 2-4.

I. AFFORDABILITY IS AN ESSENTIAL ELEMENT OF AVAILABILITY.

The FCC seeks comment on how it should consider the price of broadband as a factor in assessing broadband availability.⁹ The MTDC agrees with the FCC's assertion that the cost of broadband service is a potential barrier to subscription, and reiterates its continued support for further examination of price as an essential element of availability.¹⁰ A clear picture of actual, *functional* broadband availability is incomplete without consideration of affordability. To properly accomplish its availability assessment goals including affordability as a factor, the FCC should move forward with revisions to its Form 477 to include the collection of pricing data for broadband service.¹¹

As the MDTC has previously noted, both Congress and the FCC have repeatedly stressed the need for deploying affordable broadband access to all Americans.¹² For instance, one of the goals of the *National Broadband Plan*, which Congress directed the FCC to develop, is to ensure that “[e]very American . . . ha[s] affordable access to robust broadband service, and the means and skills to subscribe if they so choose.”¹³ Indeed, one of the basic universal service principles enumerated by Congress in Section 254 of the Act is that all Americans should receive “[q]uality services . . . at just, reasonable, and *affordable* rates.”¹⁴ In Massachusetts, the state legislature echoed similar principles in the act establishing the Massachusetts Broadband Institute, stating

⁹ Ninth NOI, ¶ 48.

¹⁰ *Id.*

¹¹ Ninth NOI, ¶ 48, n.125. *See generally*, *Modernizing the Form 477 Data Program*, WC Docket No. 11-10, NPRM, 26 FCC Rcd 1508 (2011).

¹² Seventh NOI, MDTC Reply Comments, GN Docket No. 10-159 (filed Oct. 5, 2010), at 3.

¹³ OBI, FCC, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN, GN Docket No. 09-51, at xiv (2010)(“National Broadband Plan”), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296935A1.pdf.

¹⁴ 47 U.S.C. § 254(b)(1) (emphasis added).

that the purpose of the institute “shall be to achieve the deployment of *affordable* and ubiquitous broadband access across the commonwealth.”¹⁵ Contrary to AT&T’s suggestion that the FCC should “distinguish between availability ... and adoption” and on issues such as “cost, quality and adoption” as a part of the FCC’s analysis, a clear understanding of the costs of access to broadband is central to the FCC’s availability inquiry.¹⁶

Accordingly, the MDTC encourages the FCC to reform the Form 477 data collection process to include pricing data, which is essential in order to make an appropriate affordability and functional availability analysis.¹⁷ Without this necessary and practical revision, the FCC cannot accurately fulfill its Section 706 mandate to examine the availability of advanced services.

In addition, the FCC’s collection of price data through Form 477 holds tremendous potential value to state commissions as it will allow states to conduct more thorough examinations of availability of advanced services and the competitive landscape at the state level. For example, the MDTC has attempted to examine the *functional*¹⁸ availability of broadband and internet service in Massachusetts based on currently-available Form 477 data, but finds the conclusions lack sufficient granularity and specificity. The current data shows 2 million residential subscriptions to fixed internet access service in Massachusetts, resulting in a

¹⁵ The MBI is a quasi-public agency tasked by Governor Deval Patrick to meet the broadband access needs of unserved citizens throughout Massachusetts. *See An Act Establishing and Funding the Massachusetts Broadband Institute*, Chapter 231 of the Acts of 2008, *codified at* G. L. c. 40J, §§ 6B-C.

¹⁶ AT&T Comments, at 4-5.

¹⁷ Ninth NOI, n.125.

¹⁸ Physical unavailability is obvious – if any members of the defined area do not have access to broadband, then it is physically unavailable to that segment of the population. Functional unavailability means that, although broadband may be physically available to certain residents or businesses, in practice the broadband service is not used or is functionally inaccessible to those residents. There may be many reasons why broadband is available but not used, and these reasons may include such factors as service quality, affordability, and a lack of competitive choices.

78% subscription rate to Internet access service.¹⁹ Attachment 1 hereto shows the percentage of households subscribing to Internet access service in each of the 1,362 census tracts in Massachusetts. The map shows consistent subscription rates across most of Massachusetts; for example, by area, 93% of Massachusetts is covered by a census tract where adoption rates exceed 60%. However, disparities in adoption are almost completely isolated to the highest density areas of the Commonwealth, where subscription rates fall below 40%. Ninety percent of the lowest adopting census tracts are located in urban areas, including Boston, Brockton, Lynn, Springfield, and Worcester. Those tracts account for 10% of Massachusetts households. The near uniformity in subscription rates across the Commonwealth combined with the exceptionally low adoption rates in specific urban neighborhoods *suggests* that affordability of Internet access service is a significant hurdle for a large and concentrated portion of the Commonwealth's residents. This evaluation is useful at the state level, but the MTDC's analysis could be more refined and accurate if the FCC revises its Form 477 to include pricing data.

The FCC initially adopted certain speed and deployment levels in its Sixth Broadband Progress Report and has maintained these goals in subsequent reports.²⁰ The FCC's Section 706 broadband progress evaluation is strongly guided by goals outlined in the National Broadband Plan, which set an availability goal for affordable access of a broadband offering with at least 100 Mbps download transfer rate and a 50 Mbps upload rate to 100 million U.S households by

¹⁹ This percentage presumes no more than one internet access subscription per household. Internet access is defined here as transmission at transfer rates of at least 200 kilobits per second (kbps) in both the download and upload directions.

²⁰ Sixth Broadband Deployment Report, GN Docket No. 09-137, FCC 09-51 (rel. July 20, 2010); Seventh NOI, GN Docket No. 10-159, FCC 10-148 (rel. Aug. 6, 2010); Eighth NOI, GN Docket No. 11-121, FCC 11-124 (rel. Aug. 5, 2011).

the year 2020.²¹ To track achievement of this goal, the Plan recommended an interim 2015 goal of affordable access to broadband service of at least 50 Mbps download transfer rate and 20 Mbps upload transfer rate to 100 million households.²² The Plan also recommended a universal goal of 4 Mbps download transfer rate and 1 Mbps upload transfer rate by 2020.²³ The FCC does not currently collect enough information on progress towards these goals. Absent a comprehensive set of data, collected through a revised Form 477 that evaluates the speed, quality, pricing and adoption of broadband service, the FCC cannot complete a meaningful evaluation of the availability of broadband access.

II. QUALITY OF SERVICE METRICS ARE NECESSARY.

The FCC seeks comment on whether latency and usage capacities should be considered in the evaluation of both fixed and mobile advanced telecommunications services.²⁴ The MDTC supports incorporating service quality measurements into the definition of advanced telecommunications services. Both latency and usage capacity are metrics that are directly relevant to the consumer's experience and ability to access advanced telecommunications service, but the MDTC believes that the establishment of a threshold is premature.

The comments of the California Public Utilities Commission (CPUC) are particularly instructive to this question.²⁵ The CPUC is conducting mobile services field tests measuring latency, transmission control protocol, and user datagram protocol.²⁶ The CPUC's Initial Staff Report notes that "these results were only the first in a series drive tests to be conducted over

²¹ National Broadband Plan, at 9.

²² *Id.*

²³ *Id.* at 135.

²⁴ Ninth NOI, ¶¶ 14-30.

²⁵ *See generally*, California Public Utilities Commission (CPUC) Comments.

²⁶ *Id.* at 4.

several years, so it is premature to draw any long-term conclusions.”²⁷ Similarly, the FCC should initiate a regular collection of service quality data as the first step in establishing quality thresholds into the definition of advanced telecommunications service.

The FCC asks whether a household can be considered as served by advanced telecommunications service if the household is only served by a mobile service that meets the benchmark for fixed broadband service.²⁸ The MDTC believes that this is only possible when the FCC evaluates quality and affordability in the service assessment. The Eighth Broadband Progress Report correctly considers mobile service as distinct from fixed services when evaluating the availability of advanced services.²⁹ The speed threshold for mobile service is lower than the speed threshold for fixed broadband service. In addition to the differences in speed, the FCC recognizes disparities in the provision of broadband service delivered over a mobile network versus a fixed broadband connection.³⁰ The MDTC suggests that user experience disparities do not presently allow the FCC to consider mobile as a substitute for fixed advanced telecommunications service. The inability of consumers to substitute fixed broadband service with a mobile product is only further compounded by pricing disparities. The FCC should consider mobile service only in isolation when quality and affordability are incorporated into the assessment of access to advanced telecommunications service.

III. THE FCC SHOULD MEASURE AVAILABILITY TO COMMUNITY ANCHOR INSTITUTIONS.

²⁷ *Id.*

²⁸ Ninth NOI, ¶ 25.

²⁹ Eighth Broadband Progress Report, GN Docket No. 11-121, ¶ 25

³⁰ Ninth NOI, ¶ 22.

The FCC should prioritize the measurement of broadband availability to CAIs, such as schools, libraries, and hospitals, as an annual benchmark of progress. As the MDTC has previously noted, CAIs play a vital role in their local communities.³¹ Such a role is recognized in the National Broadband Plan (NBP) which seeks “to ensure public priorities take advantage of the benefits broadband networks, applications and devices offer.”³² The NBP correctly infers that connecting CAIs will further the goal of connecting communities, stating that “unleashing the power of new broadband applications to solve previously intractable problems will drive new connectivity demands.”³³ Using CAI connectivity as a catalyst for connectivity of a larger community is happening now, as the Broadband Technology Opportunities Program (BTOP) has prioritized Comprehensive Community Infrastructure projects in its round two funding.³⁴

Clearly, connecting CAIs is an important milestone in achieving the goal of ubiquitous broadband availability, and measurement of CAI connectivity would therefore provide meaningful insight on the progress of deployment. The MDTC concurs with the National Association of Telecommunications Officers and Advisors (NATOA) that the “Commission should examine the availability of broadband at community anchor institutions, such as schools and libraries.”³⁵ Such a measurement will not be easy, as collecting data about CAIs will require State Broadband Data and Development (SBDD) agencies to identify and query thousands of individual CAIs about broadband provisioning and speed. Moreover, the

³¹ Eighth NOI, MDTC Comments, GN Docket No. 11-121, at 2-4 (filed Sept. 6, 2011).

³² National Broadband Plan, at 10.

³³ *Id.*

³⁴ NTIA, DOC, Notice of Funds Availability and Solicitation of Applications: Broadband Technology Opportunities Program, Docket No. 0907141137-0024-06, at 8 (Jan. 15, 2010), *available at* <http://broadbandusa.gov/files/BTOP%20NOFA%201-15-10%20with%20disclaimer.pdf>

³⁵ NATOA Comments, at 8.

nature of CAIs institutional usage relative to household broadband usage should be considered when measuring speed. Therefore, the MDTC strongly recommends the FCC adopt appropriate CAI-specific benchmarks because a comprehensive assessment of broadband availability at CAIs would provide meaning measurement of deployment progress.

V. CONCLUSION

For these reasons, the FCC should move forward on its reform of the Form 477 to include pricing data to allow for more complete analysis of functional availability as part of its Section 706 report to Congress. The FCC should also include service quality measurements to ensure that baseline services are comparable across different technologies and geographic areas. Finally, the FCC should measure connections to community anchor institutions as an annual benchmark of progress.

Respectfully submitted,

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Attachment 1

Percentage of Massachusetts households subscribing to Internet Access service

